

CLAIMS

I claim:

1. A concrete formwork panel comprising:

a plastic core;

a metal facing layer attached to said plastic core;

a metal backing layer attached to said plastic core;

said panel being thicker than 7 millimeters (mm).

2. A concrete formwork panel as in claim 1 wherein said panel ranges from 9 mm to 15 mm thick.

3. A concrete formwork panel as in claim 1 wherein said panel is 12 mm thick.

4. A concrete formwork panel as in claim 1 wherein said panel weighs 77 pounds or less.

5. A concrete formwork panel as in claim 1 wherein said metal facing layer and said metal backing layer are steel.

6. A concrete formwork panel as in claim 1 wherein one of said metal facing layer and said metal backing layer is made of 0.09 inch (0.23 mm) steel.

7. A concrete formwork panel as in claim 1 wherein one of said metal facing layer and said metal backing layer is made of 0.013 inch (0.33 mm) steel.

8. A concrete formwork panel as in claim 1 wherein one of said metal facing layer and said metal backing layer is made of 0.019 inch (0.48 mm) steel.

9. A concrete formwork panel as in claim 1 wherein said metal facing layer and said metal backing layer are aluminum.

10. A concrete formwork panel as in claim 1 wherein said plastic is foam plastic.

11. A concrete formwork panel as in claim 10 wherein said foam plastic is 40% or more gas by volume.

12. A concrete formwork panel as in claim 10 wherein said foam plastic is 50% or more gas by volume.

13. A concrete formwork panel as in claim 1 wherein said plastic is high density polyethylene.

14. A concrete formwork panel as in claim 1 wherein said panel is bent to

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form a flange.

15. A concrete formwork panel as in claim 14 wherein said flange has openings formed in it.

5 16. A concrete formwork panel as in claim 14 wherein said panel is notched at said bend.

17. A concrete formwork panel as in claim 16 wherein said bend is a 90° bend.

18. A concrete formwork panel as in claim 14 wherein there are two of said bends and said flange is a double-thick flange.

10 19. A concrete formwork panel as in claim 1 wherein said panel is bent into a hollow columnar form.

20. A concrete formwork panel as in claim 19 wherein said columnar form is cylindrical.

15 21. A concrete formwork panel as in claim 19 wherein said panel has a first end and a second end, a portion of said plastic and said facing is removed from said first end and a portion of said plastic and said backing is removed from said second end, and said ends are joined with a portion of said backing of said first end overlapping said backing of said second end and a portion of said facing of said second end overlapping said facing of said first end.

20 22. A concrete formwork panel as in claim 1 wherein said facing has an architectural detail impressed in it.

23. A concrete formwork panel as in claim 1 and further including a strengthening rib attached to said metal backing layer.

25 24. A concrete formwork panel as in claim 23 wherein said strengthening rib includes a handhold.

25. A concrete formwork panel as in claim 1 wherein said facing and said backing are attached to said plastic with adhesive.

30 26. A concrete formwork system comprising a plurality of concrete formwork panels as in claim 1 and a plurality of fasteners fastening said plurality of panels together.

27. A concrete formwork system as in claim 26 and further comprising a support framework adjacent said backing.

28. A concrete formwork system as in claim 27 wherein said framework comprises steel frame members.

29. A method of making a concrete formwork material comprising:
extruding a plastic core;

5 forming a sandwich of a metal facing layer, a first adhesive layer, said plastic core, a second adhesive layer, and a metal backing layer, said sandwich being thicker than 7 millimeters (mm); and

heating said sandwich to form said formwork material.

10 30. A method as in claim 29 wherein said sandwich ranges from 9 mm to 15 mm thick.

31. A method as in claim 29 wherein said metal backing layer and said metal facing layers are steel sheets between 0.008 inches (0.20 mm) and 0.025 inches (0.6 mm) thick.

32. A method of forming concrete comprising:

15 providing a concrete formwork panel comprising a plastic core; a metal facing layer attached to said plastic core; and a metal backing layer attached to said plastic core;

forming a concrete form using said concrete formwork panel; and
pouring concrete into said concrete form.

20 33. A method as in claim 32 wherein said step of providing comprises providing a plurality of said concrete formwork panels and a plurality of fasteners; and said step of forming comprises forming said concrete form using said plurality of formwork panels and said fasteners.

34. A method as in claim 32 wherein said plastic is foam plastic.

25 35. A method as in claim 32 wherein said plastic is high density polyethylene.

36. A method as in claim 32 wherein one of said metal facing and said metal backing comprises steel.

30 37. A method as in claim 32 wherein said step of providing further comprises providing a support framework, and said step of forming comprises supporting said concrete formwork panel with said support framework.

38. A method as in claim 37 wherein said support framework comprises

steel frame members.

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